

FY 2004 Self-Assessment Plan
For
NSLS Department

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NSLS Department

FY 2004 NSLS Self – Assessment Plan

A. Purpose

As required by BNL's performance based management program, the NSLS annually establishes performance objectives derived in part from the BNL Critical Outcomes. These performance objectives are established for each fiscal year, and are reviewed annually at the end of the fiscal year.

The purpose of the NSLS self-assessment program is to collect data that indicates accomplishment relative to the NSLS performance objectives. Through this review, it is intended to identify strengths and improvement opportunities for NSLS managers that are important to the NSLS mission and organizational success.

B. Scope

This self-assessment plan addresses the performance objectives and measures that have been established for NSLS for FY 2004. The plan incorporates guidance and requirements contained in the Integrated Assessment Subject Area.

The NSLS Self-Assessment Plan considers each of the following BNL self-assessment framework criteria:

1. Leadership Commitment and Involvement
2. Human Resource Development and Management
3. Customer Focus and Satisfaction
4. Process Management
5. Business and Operational Results
6. Compliance with Laws, Regulations, and Contractual Requirements

The plan includes a set of BNL-required core assessments that are conducted yearly. Some of the assessments in the plan may be conducted periodically at intervals not exceeding three years.

C. Responsibilities

The NSLS Chair has overall responsibility for ensuring that this Self-Assessment Plan is implemented. This responsibility for conducting self-assessments has been delegated as defined in the plan. The responsibility for management and administration of the self-assessment program has been delegated to the Associate Chair for ESH/Q. Personnel qualified to make the required determinations shall conduct assessments.

D. Development of Fiscal Year Performance Objectives

Each year, the NSLS Policy and Planning Committee will establish performance objectives for the NSLS. These objectives will be based on the NSLS critical areas and Laboratory-wide

performance objectives. In establishing the annual performance objectives, the following issues will be considered:

- BNL annual performance objectives
- NSLS operational and business needs
- Changes in BNL Requirements
- DOE/User/Staff/External Community Views and Expectation
- Significant ESH Issues

Performance objectives established by NSLS will reflect excellence, but will also be consistent with budgetary constraints and should be achievable. The FY 2004 performance objectives and measures are listed in appendices A and B. Responsibilities for analyzing performance measures are shown in appendix C. Formal FY 2004 audits and assessments are listed in appendix D.

E. Reports

As requested by the Department Chair or other Associate Chairs, quarterly reports may be utilized to track status and trends of certain performance objectives. Each assessment activity will be documented through an appropriate report utilizing a format established by the NSLS. A summary report will be prepared annually that reviews NSLS's over-all performance. The annual report shall be approved by the Department Chair and forwarded to the Associate Director for Light Sources.

F. Corrective Actions and Evaluation

The over-all results of the self-assessment activities will be reviewed annually by the NSLS Policy and Planning Group (PPG). Any deficiencies identified in the Self-assessment will be discussed with the responsible manager and appropriate corrective actions will be established as needed. If deemed warranted by the Department Chair, corrective actions will be tracked through the NSLS Assessment Tracking System until findings are formally closed.

G. Appendices

- Appendix A - FY 2004 Performance Objectives
- Appendix B - FY 2004 Performance Measures
- Appendix C - FY 2004 NSLS Self-assessment Matrix
- Appendix D - Audits, Inspections, Assessments scheduled for FY 2004

H. References

- FY2004 BNL Critical Outcomes, Performance Objectives, and Measures
- BNL Integrated Assessment Program Management System Description
- BNL Integrated Assessment Subject Area

Appendix A

FY 2004 Performance Objectives

The National Synchrotron Light Source serves as a resource for the production of synchrotron light and as a focus for the multidisciplinary scientific community that utilizes its capabilities for their research. To succeed in our mission, we must achieve excellence in the following critical areas:

Science and Technology: We will deploy our resources to provide the highest possible level of scientific performance, and continue to develop new capabilities in sources and science to extend the reach of the scientific community.

Operational Excellence: We will maintain and operate our facilities at the highest level of reliability that resources and technology allow, and we will conduct all activities in a safe and environmentally sound manner.

Leadership and Management: We will facilitate the highest quality science through the use of best management practices; and we will strive to ensure a high quality working environment for our users and staff.

Annually, performance objectives derived from these critical areas are established to provide focus and direction for the fiscal year. The performance objectives for fiscal year 2004 are as follows:

FY 2004 Performance Objectives

Objective 1 - Provide high priority to establishing a major upgrade to the NSLS facility to provide increased photon brightness and beam line capability.

Strategy: We will continue to build support for the new machine and establish the scientific value through a series of workshops. This year we will submit our CD0 proposal to DOE and begin our preparation for the Conceptual Design Report for NSLS-II. It will be very important this year to acquire additional scientific support for the development of machine concepts and to stimulate discussion of NSLS-II technical issues among NSLS and BNL accelerator staff. As a part of this effort, we will want to define roles and responsibilities for current NSLS staff with regard to the design work currently underway. We also need to critically evaluate the ERL option to ensure a thorough understanding of this aspect of NSLS – II.

FY 2004 targets

- Improve the definition of the CD0 proposal and define responsibilities for publication. Ensure that the science workshops are properly recorded and provide input into the proposal.

- Establish a Machine Advisory Committee and convene it prior to the issuing the CD0 proposal.
 - Define roles and responsibilities for upgrade and develop specific objectives for individuals for FY04.
 - Submit CD0 proposal to DOE this year.
 - Organize a major workshop for NSLS-II following the submission of the proposal.
 - Continue to seek accelerator physicists to support the NSLS – II design.
 - Visit Budka and determine if there is a good fit to collaborate with them in the design. If feasible and desirable, we will prepare a MOU for their support of the upgrade.
 - Promote on-going discussion of machine concepts through frequent tech notes and frequent discussions with RHIC and other accelerator personnel.
 - Critically evaluate the ERL and determine its potential role in the upgrade.
 - Establish a plan for development of the conceptual design report
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Objective 2 -Maintain interest and awareness of NSLS accelerator and beam line research and provide high priority to improving communication with NSLS stakeholders regarding NSLS accomplishments.

Strategy: We will continue to highlight NSLS accomplishments and importance through science articles on web, newsletters and the BNL Bulletin. We will also continue to build the intellectual atmosphere through regular presentations and collaborations with key scientists in our important programmatic areas. We will continue to plan and develop workshops and short courses and improve awareness and knowledge of current NSLS capabilities. We also seek to facilitate new proposals for work at the NSLS.

FY 04 Targets

- Conduct the powder diffraction work shop in first half of year
 - Improve description of beam line capability and accomplishment. Include more visuals and add highlights of beam work.
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Goal 3 – Provide high priority in the allocation of resources to upgrade existing beam and establish new beam lines. In particular we will seek to improve:

- **Support to beam line activities**
- **Beam line controls**
- **Beam line detectors**
- **Photon fluence and brightness delivered to experiments**

Strategy: Emphasis will continue within the NSLS to provide a high level of support to the beam lines through allocation of personnel resources and operating funds.

FY 2004 Targets

- Complete the documentation of beam line capability and staff responsibilities so there is a clear understanding of beam lines and responsibilities.
- Complete upgrades to X-13, X-21, X-27a
- Initiate planning for upgrade of X-13b

Objective 4 – Maintain the injector systems and storage rings in a manner to ensure continued high reliability.

Strategy: We will want to continue to ensure high quality performance of the existing facility throughout the remainder of its operating life. We will want to determine potential vulnerabilities that may compromise performance over the next 10 years and identify a course of action. We will also want to address a current known vulnerability associated with poor operating documentation.

FY 2004 targets

- Maintain 95% reliability of the storage rings.
- Evaluate machine systems and determine potential vulnerabilities to performance over the next 10 years. Determine upgrades that are needed to ensure a continued high level of performance over that period.
- Develop updated operating manual for control room which pulls together and updates existing operating documentation.
- Form a linac to booster study group with Operations and Accelerator Division personnel to develop a better understanding of operational characteristics for injection into the storage rings.

Objective 5 - Provide vital transitional support to the DUV-FEL as it shifts from a construction project to a world-class research facility.

Strategy - For DUV-FEL to succeed we need to establish secure programmatic funding. To achieve this we need to attract wider user support and understanding of the DUV-FEL capability. A workshop will be planned to discuss SDL capabilities and to develop the science base for the SDL program. Based on this workshop we will submit a funding proposal to DOE in FY 2004. Specific technical issues important to SDL performance as a user facility will be addressed this year through LDRD, PD, and NSLS funding.

FY 2004 Targets

- Develop plan for acquiring DUV-FEL funding from DOE.
- Upgrade accelerator energy to 300 MeV to provide capability for shorter wavelength light output of the FEL.
- Continue with the development and implementation of the ultrafast wire source. Seek to find a good user who may become the champion of this new source technology.
- Acquire official “operational” status for the DUV-FEL by successfully completing the Accelerator Readiness Review required by the Accelerator Safety Subject Area.

Objective 6 - Ensure operational excellence in ESH and waste management programs.

Strategy - The tenets of ISM and ISO 14001 will continue to be implemented, with on-going emphasis of work planning, training, pollution prevention, and compliance with BNL ESH regulations. It will be important to define mechanisms for ESH input into the conceptual design for NSLS-II to ensure that important ESH issues are identified at an early stage in the development of NSLS-II design. Other ESH initiatives determined through the BNL critical outcomes will also be identified and addressed as required.

FY 04 Targets:

- Establish a performance plan to improve safety awareness, commitment, and performance within the department.
- Initiate a preliminary hazards and environmental evaluation of the design concepts for NSLS – II

- Complete the NSLS SAD revisions and obtain BNL management approval
 - Continue evaluation of synthetic vacuum pump oil as a means of reducing generation rates of waste oils.
 - Determine a disposal mechanism for waste depleted uranium owned by the NSLS and dispose of current inventory.
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Objective 7: Define and implement a program to improve beam line productivity, management and operation of beam lines.

Strategy:

The current PRT management system at the beam lines has greatly weakened in recent years and has reached the point that many beam lines are not effectively managed and are increasingly non-productive and non-responsive to NSLS expectations. Development of a new approach to beam line management will be discussed and developed with DOE and PRT management. Implementation will begin by the end of the fiscal year.

We will also seek improved productivity through the development of a new web based system for submission of research proposals for work at NSLS beam lines. This system will also be used to improve safety review of new proposals.

FY 2004 Target

Implement User access policy and procedures in FY 04

- Complete user access policy
 - Revise procedures for implementing user access policy
 - Complete development of PASS system and implement
 - Initiate MOUs with all PRTs and Contributing Users.
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Objective 8: – Investigate and pursue where feasible new programmatic areas for the beam lines and accelerator staff which enhance the production and use of synchrotron radiation.

Strategy

NSLS management will encourage and support staff efforts to identify new areas of opportunity for the complex. An important source of funding for the development of new program initiatives will be the LDRD process, but management will provide additional resources to aid in the investigation. An example of the type of new program opportunity is “Imaging”.

FY 2004 Target

Discuss a mechanism for encouraging staff exploration of new opportunity and consider a mechanism for initiative evaluation and selection process.

Appendix B

FY 2004 Performance Measures

Performance measures are established as a tool to evaluate overall performance of the NSLS programs. In general, the performance measures are developed to measure success and trends related to the three critical areas identified in Appendix A and not necessarily directly coupled to the FY 2004 performance objectives. It is expected that successful accomplishment of the annual performance objectives will produce observable and positive change in the measures that are being tracked. However, it should also be noted that specific measures are also provided to track progress on targets authorized and funded for this year to ensure adequate management control and accountability of annual department performance objectives.

1. Excellence in Science and Technology

1.1 The mission of the NSLS is to provide a facility in which outstanding research can be performed. The success of the department in carrying out its mission will be evaluated by:

- The quality of scientific achievements in FY 2004
- The development of significant instrumentation
- The development of significant computer/software
- The receipt of awards and other recognition for work performed at NSLS
- # of publications in refereed journals, or major reports
- # of talks and invited talks at Conferences and workshops
- # of personnel participating in peer review, or other reviewing activity
- # of personnel performing editorial activity or publishing major book articles
- # of Patents or disclosures facilitating the quality of science
- # of technology developments facilitating the quality of science
- # of personnel participating on technical review committees

1.2 The DOE is the primary customer of the NSLS. It is important that NSLS support DOE's needs and contribute to the success of DOE's mission. This objective will be evaluated by:

- Contribution to DOE S&T program for major programs
- Number of FWP's submitted to DOE by NSLS
- Non-DOE funded programs that connect to DOE
- Collaborations with other Laboratories or universities
- Service activity for DOE program or at national/regional level
- Program development for DOE

1.3 The attractiveness of the NSLS to its user community strongly depends on its ability to provide a high quality beam in a highly reliable manner. This objective will be evaluated by:

- Operation of facility compared to scheduled hours
- Operation of facility at specified or superior parameters
- Number of internal users
- Number of external users
- Activity and recommendations of Users Executive Committee and the Science Advisory Committee.

1.4 The success of the NSLS also depends on its ability to administer its on-going budget in a timely manner, to attract and retain a highly skilled staff, and to encourage and promote development of new ideas which can lead to scientific and technological improvements. This objective will be evaluated by:

- Changes in S&T staff distribution
- Staff increases or losses
- Number and background of new staff hires
- Number of postdocs in the department
- New initiatives proposed by department
- New initiatives actually started by department

2. Operational Excellence

The NSLS will seek excellence in environment, safety and health performance through effective work planning and through compliance with applicable ESH subject areas. This objective will be measured by:

- Progress and status of all audits, inspections, and assessments (see appendix D) and will be monitored.
- Results of reviews and trends of reported RCRA, radiological, safety and health violations will be compared to previous years.
- The number of recordable and lost work case injuries will be monitored and compared to previous years' rates.
- The radiation exposure to personnel and area monitor data will be tracked and compared to previous years' values.
- The number of reportable occurrences, NCRs and RARs will be tracked and compared to previous years' values.
- The number of significant spills or other releases to the environment will be tracked and compared to previous years' experience.
- Waste generation rates will be trended and compared to previous years' production.
- The progress of specific ESH targets for FY 2004 will be assessed at midyear and at the end of the year.

3. Leadership and Management

The NSLS will measure its effectiveness in managing performance objectives, budgets and projects by:

- A management review of progress towards the annual performance objectives listed in appendix A will be conducted by April 30 and again by 9/30/02.
- Project performance will be reported to the responsible manager in writing on a monthly basis.
- Designated projects will be reported on a quarterly basis to the Operations Council.
- Status of budgets will be reported to responsible managers on a monthly basis. The Administrative Group will provide a summary of budget variances to the PPG on a quarterly basis.

Appendix C

FY – 2004 NSLS Self-assessment Matrix

Number	NSLS Critical Objective	Method of Evaluation	Performance Measure	Owner	Due Date
NSLS - 01	Science & Technology	Collect information as defined in 1.1 and compare to previous performance	Positive trends in data compared to previous years	Kao	8/30
NSLS - 02	Science & Technology	Collect information as defined in 1.2	Does Information support NSLS contributions to DOE programs	Kao	8/30
NSLS - 03	Science & Technology	Collect information as defined in 1.3 and compare to previous performance	Positive trends	Johnson	8/30
NSLS - 04	Science & Technology	Collect data as defined in 1.4 and compare to previous performance	Positive trends	Terrano	8/30
NSLS - 05	operational excellence in ESH & WM	Collect data indicated in 2.	Data indicates productive year & compares well to history	Casey	8/30
NSLS - 06	operational excellence in ESH & WM	Inspections, audits and assessments will be conducted as defined in appendix D.	Trends and findings compared to previous years	Casey	8/30
NSLS - 07	Leadership and Management	Review of progress on authorized department projects and budgets	Status compared to budget and schedule	Responsible Manager	N/A
NSLS - 08	Leadership and Management	Review of progress towards annual performance objectives	Status of targets and schedules	Dierker	4/30 & 9/30

Appendix D

Audits, Inspections, Assessments scheduled for FY 2004¹

The following assessments and audits are planned for FY 2004 at the NSLS. It should be noted that the assessment dates are for planning purposes and are subject to revision.

1. Tier 1 inspections of NSLS workplaces consistent with BNL requirements for this program will be conducted throughout the year. A summary report will be issued by 6/30/04 (Responsible Person: Tier 1 Coordinator)
2. An internal audit of selected aspects of the NSLS Environmental Management System will be conducted by 3/31/04. (Responsible Person: NSLS QA Manager²)
3. An audit of electrical safety lock/out - tag/out practices will be conducted by 6/30/04. (Responsible Person: NSLS QA Manager)
4. A drill and critique of the Department local emergency plan will be conducted by 8/30/04. (Responsible Person: NSLS LEC and QA Manager)
5. An audit of compliance with RCRA regulations will be conducted during the 3rd quarter of FY 2004. (Responsible Person: BNL ESD)
6. An audit of compliance with liquid discharge regulations will be conducted during the 3rd quarter of FY 2004. (Responsible Person: BNL ESD)
7. A comprehensive ISO 14001 registration audit will be conducted during the 3rd quarter of FY 2004. (Responsible Person: BNL ESD – review to be conducted by independent registrar)
8. A fire safety assessment will be conducted by 6/30/04. (Responsible person: ESH Coordinator)
9. An assessment of records management will be conducted by 6/30/04. (Responsible person: Records Management Coordinator)
10. An assessment of foreign visitor assignments will be conducted by 6/30/04. (Responsible person: Foreign Visits Coordinator)
11. An audit of work planning will be completed by 6/30/04. (Responsible Person: NSLS QA Manager)

¹ In addition to the audits noted in this appendix, there are other audits scheduled by Laboratory management in conjunction with the local DOE Office that are anticipated.

² It is anticipated that the internal audit will be conducted by an independent team established by the Laboratory Environmental Services Division.

12. An assessment of maintenance management will be conducted by 6/30/04.
(Responsible person: Maintenance Coordinator/Building Manager)
13. An assessment of energy management awareness will be conducted by 6/30/04.
(Responsible person: Building Manager)
14. An assessment of occupational injury management will be conducted by 6/30/04.
(Responsible person: ESH Coordinator)
15. An assessment of OSHA compliance issues will be performed by 6/30/04.
(Responsible Person: Tier 1 Coordinator)
16. An assessment of chemical management will be performed by 6/30/04. (Responsible Person: Tier 1 Coordinator)
17. A management review of progress towards performance objectives will be conducted halfway through the year and again at the end of the year. (Responsible Person: S. Dierker)
18. An ESH management review will be conducted by 9/30/04. (Responsible Person: R. Casey)